

Some Remarks on Zero-Increasing Transformations

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Let T be a linear operator which maps polynomials of degree n to polynomials of degree n , for every n . We discuss the problem of trying to characterize the set of all such operators which satisfy

$$Z_I(p) \leq Z_J(Tp)$$

for every real-valued polynomial p , where Z_I counts the number of zeros on the interval I of \mathbb{R} .